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**For Free Throws, 50 Years of Practice Is No Help**

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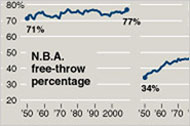
**Ronald Martinez/Getty Images**

**Tyson Chandler of the New Orleans Hornets took a free throw against the San Antonio Spurs in 2008.**

**By [JOHN BRANCH](http://topics.nytimes.com/top/reference/timestopics/people/b/john_branch/index.html?inline=nyt-per" \o "More Articles by John Branch)**

**Published: March 3, 2009**

**CEDAR CITY, Utah — Basketball in the United States has changed in myriad ways over the decades, from flat-footed set shots to dunks, from crotch-hugging uniforms to baggy knee-length shorts, from the dominance of American players to the recent infusion of international stars.**

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**[Game That Inspired ‘Hoosiers’ Shows How Free Throws Have Changed](http://www.nytimes.com/2009/03/04/sports/ncaabasketball/04hoosiers.html?ref=basketball) (March 4, 2009)**

**[Let the Record Be Unbroken](http://www.nytimes.com/2009/03/04/sports/basketball/%20http:/roomfordebate.blogs.nytimes.com/2009/03/03/let-the-record-be-unbroken/%20)**

**Since the mid-1960s, college men’s players have made about 69 percent of free throws, the unguarded 15-foot, 1-point shot awarded after a foul. In 1965, the rate was 69 percent. This season, as teams scramble for bids to the N.C.A.A. tournament, it was 68.8. It has dropped as low as 67.1 but never topped 70.**

**In the National Basketball Association, the average has been roughly 75 percent for more than 50 years. Players in college women’s basketball and the W.N.B.A. reached similar plateaus — about equal to the men — and stuck there.**

**The general expectation in sports is that performance improves over time. Future athletes will surely be faster, throw farther, jump higher. But free-throw shooting represents a stubbornly peculiar athletic endeavor. As a group, players have not gotten better. Nor have they become worse.**

**“It’s unbelievable,” Larry Wright, an adjunct professor of statistics at Columbia, said as he studied the year-by-year averages. “There’s almost no difference. Fifty years. This is mind-boggling.”**

**There are measures in other sports that have shown similar consistency, like golf scores or batting averages, but none of them are as straightforward as lobbing a ball toward a basket.**

**The consistency of free-throw percentages stands out when contrasted with field-goal shooting over all. In men’s college basketball, field-goal percentage was below 40 percent until 1960, then climbed steadily to 48.1 in 1984, still the highest on record. The long-range 3-point shot was introduced in 1986, and the overall shooting percentage has settled in at about 44 percent.**

**Utah is as good as anyplace to untangle the numbers. It is home to three of the top 10 free-throw shooting teams in men’s Division I — No. 1 Southern Utah (80.5 percent), No. 4 Utah (78.5 percent before Tuesday’s game against New Mexico) and No. 7 Utah Valley (77.0 percent, but not officially recognized by the N.C.A.A. because the program is in its final season of provisional status as a Division I team).**

**In the middle of Southern Utah’s high-paced basketball scrimmage here last week, Coach Roger Reid stopped everything.**

**Players knew what to do. Their chests heaving in exhaustion, they silently lined up and shot free throws. A miss meant a sprint around the court.**

**“A lot of coaches give it lip service, but when you say that games are won and lost at the free-throw line, you better back it up,” said Reid, who understands that individual players and teams can improve free-throw shooting through better technique and repetition. When Reid arrived at Southern Utah two years ago, he inherited a team that ranked 217th in free-throw percentage.**

**There is little correlation between free-throw percentages and winning percentages. Only one of the 25 best shooting teams, No. 2 North Carolina, is also in the latest Associated Press top 25 rankings. Southern Utah has a losing record.**

**That is why, despite accounting for more than 20 percent of scoring in men’s college basketball and just below 20 percent in the N.B.A., free throws receive a fraction of the attention from coaches, players and fans. That is, until something considered free proves costly.**

**Last season, Memphis was 38-2 despite making only 61 percent of its free throws, missing an average of nearly 10 a game. The Tigers lost the national championship game after missing 4 of 5 free throws in the final 72 seconds against Kansas, which had made a late 3-point shot to tie the game and won in overtime.**

**This season, Utah outshot opponents from the line in overtime victories over Brigham Young and Colorado State, and 1-point victories over Gonzaga and New Mexico. Those victories will probably carry Utah (20-8) to the N.C.A.A. tournament.**

**Ray Stefani, a professor emeritus at California State University, Long Beach, is an expert in the statistical analysis of sports. Widespread improvement over time in any sport, he said, depends on a combination of four factors: physiology (the size and fitness of athletes, perhaps aided by performance-enhancing drugs), technology or innovation (things like the advent of rowing machines to train rowers, and the Fosbury Flop in high jumping), coaching (changes in strategy) and equipment (like the clap skate in speedskating or fiberglass poles in pole vaulting).**

**Those factors can help explain why swimming records seemingly fall at every international event, runners broke through the four-minute-mile barrier, field-goal kickers are more accurate than ever, bowling a 300 game is not as unlikely as it once was, and home run numbers surged in major league baseball.**

**“There are not a lot of those four things that would help in free-throw shooting,” Stefani said.**

**Strength, for example, is not a significant advantage. W.N.B.A. players have outshot their N.B.A. counterparts twice in the past three years, and women in college have been close to the men’s average for two decades.**

**There has not been a serious innovation in the way free throws have been shot for 50 years. The few still using a one-hand set shot from the chest, or even an underhand style, generally gave way to a flat-footed version of the burgeoning over-the-head jump shot. And although international players have helped the free-throw rate — Wright, the Columbia statistician, calculated that foreign-born players in the N.B.A. this season are shooting about 1.4 percentage points higher than their American-born counterparts — it cannot fully explain why the league is threatening the record high of 77.1, set in 1974.**

**Equipment, too, is virtually unchanged from 50 years ago. There have been only slight alterations to the ball, the rims and the backboards.**

**That leaves only one of Stefani’s four factors that might reasonably affect free-throw averages: coaching.**

**Coaches admit to baselines of acceptability for their players and teams. The average, apparently, is about 75 percent in the N.B.A. and 69 percent in college basketball. When numbers slip, time is devoted to improvement. When they rebound, the game’s other facets take precedence.**

**“A lot of coaches don’t want to spend time on it in practice,” said Blake Ahearn, a former Missouri State player who is the N.C.A.A.’s leader in career free-throw percentage (94.6) and now leads the N.B.A. Development League as a guard for the Dakota Wizards. “They want to work on defenses and offenses and schemes.”**

**But even practice has never made perfect. The general rule is that players, in games, shoot 10 percentage points below their practice average. The difference is pressure and fatigue, hard to replicate in an empty arena.**

**Utah Valley and Chicago State were tied with a minute left in last week’s game in Orem, Utah. About two-thirds of a winning team’s points in the final minute typically come from the free-throw line, which is why Utah Valley wanted the ball in Ryan Toolson’s hands. His career free-throw average is 94 percent.**

**Toolson was fouled on a drive with 51 seconds left. Swish, swish.**

**He was fouled with 18 seconds left. Swish, swish.**

**He was fouled with 9 seconds left. Swish, bonk.**

**The crowd murmured. The game was momentarily in doubt. But after Utah Valley escaped with a victory, thanks to two more free throws, Coach Dick Hunsaker praised Toolson as Mr. Clutch.**

**“Except that free throw,” Toolson whispered to himself.**

**A version of this article appeared in print on March 4, 2009, on page A1 of the New York edition with the headline: For Free Throws, 50 Years of Practice Is No Help.**